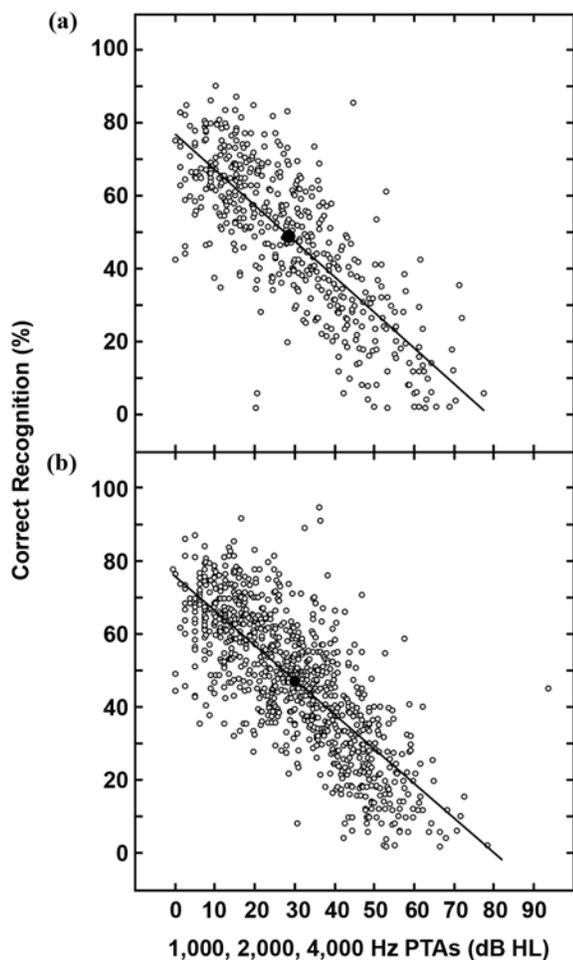


**Prevalence and degree of hearing loss among males in Beaver Dam cohort: Comparison of veterans and nonveterans**

Richard H. Wilson, PhD, et al.



The Epidemiology of Hearing Loss Study conducted in Beaver Dam, Wisconsin, between 1993 and 1996 included 999 veteran and 590 nonveteran males 48 to 92 years of age. Hearing tests were conducted with tones and with words presented in quiet and presented in background noise. Two basic findings were found. First, the percent of participants with hearing loss increased with age. Second, no difference existed between the hearing abilities of veterans and nonveterans.

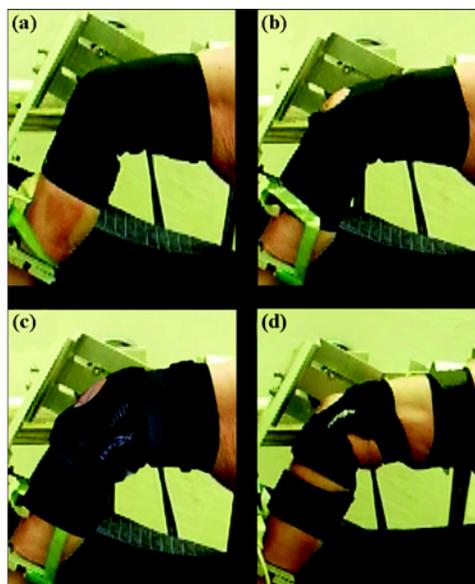
**Self-reported cognitive symptoms following mild traumatic brain injury are poorly associated with neuropsychological performance in OIF/OEF veterans**

Robert J. Spencer, PhD, et al.

Some veterans who have sustained a mild traumatic brain injury (mTBI) report difficulties with memory, attention, organization, and slowed information processing. Department of Veterans Affairs clinicians typically ask veterans to provide a self-assessment of these cognitive problems. This study examined data from 105 veterans with mTBI to determine how strongly self-reported cognitive problems correlate with scores on objective cognitive tests. Counter to the predictions of a sample of medical professionals, self-reported cognitive functioning was unrelated to objective test performance but was strongly related to depression and anxiety. These findings illustrate the importance of assessing and treating psychiatric symptoms when veterans report cognitive problems.

**Effect of bracing on dynamic patellofemoral contact mechanics**

Nicole A. Wilson, PhD, et al.

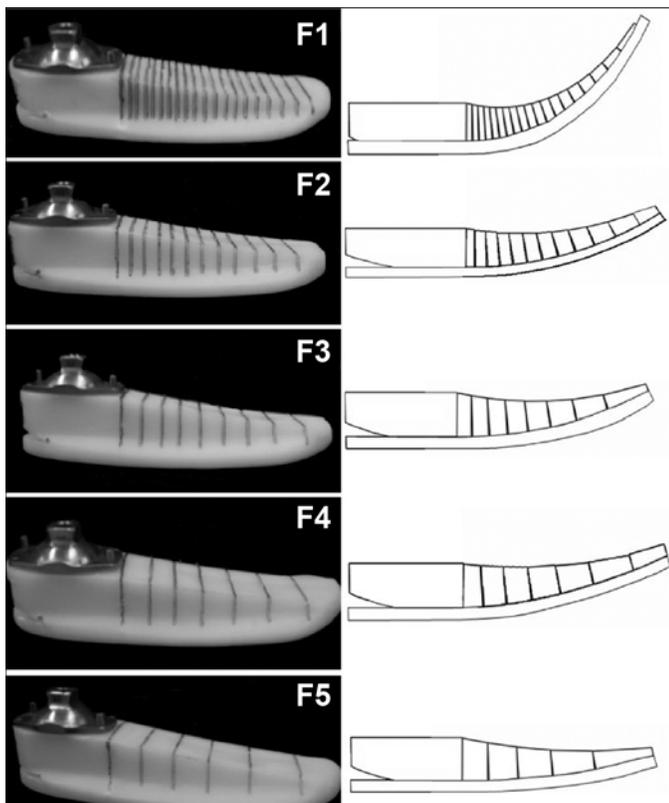


Knee braces with substantially different construction and designs are available. These differences may account

for the inconsistent effectiveness of bracing treatment for knee pain. We found that sleeve braces compress the quadriceps tendon, while wrap-style braces reduce peak pressure and shift the peak pressure location. Therefore, sleeve braces may be useful for treating patellar subluxation and wrap-style braces may be effective for treating patellofemoral disorders associated with cartilage degeneration. Some patients with knee pain present with altered patellofemoral motion, which was not represented in this study.

### Effects of prosthetic foot forefoot flexibility on oxygen cost and subjective preference rankings of unilateral transtibial prosthesis users

Elizabeth Klodd, MS, et al.



Little is known about the functional characteristics of prosthetic feet and their effects on gait. This study examined the effects of prosthetic foot forefoot flexibility on the amount of oxygen needed to walk a given distance (oxygen cost) and the preference for these systems by persons with unilateral transtibial amputations. The flexibility of the forefoot did not significantly affect the oxygen cost during walking on a treadmill at self-selected

speeds. However, prosthesis users tended to dislike prosthetic feet with an overly flexible forefoot in favor of those that more closely matched the biological system's flexibility during walking.

### Prevalence, predictors, and outcomes of poststroke falls in acute hospital setting

Arlene A. Schmid, PhD, OTR, et al.

People who have a stroke are at great risk for falls; however, most falls research is conducted while patients with stroke are in rehabilitation or after discharge from the hospital. We found falls to occur while patients with stroke were still in the acute hospital inpatient setting. Those with a National Institutes of Health Stroke Scale (NIHSS)  $\geq 8$  were at greatest risk for a future fall. Those who did fall in the acute setting were also more likely to demonstrate a loss of functional status. We encourage therapists and nurses to use the NIHSS as a quick screen for falls while patients are still in the acute setting. Prevention of falls during this early stage of hospitalization may translate to fewer future falls during rehabilitation and after discharge.

### Responsiveness and validity of three dexterous function measures in stroke rehabilitation

Keh-chung Lin, ScD, OTR, et al.

This article compares the ability of three instruments (Box and Block Test [BBT], Nine Hole Peg Test [NHPT], and Action Research Arm Test [ARAT]) to detect changes (responsiveness) and to relate to motor impairment, daily function, and quality of life after stroke rehabilitation (concurrent validity). Our results confirm that the BBT, NHPT, and ARAT are suitable to detect changes over time. While simultaneously considering the responsiveness and validity attributes, we found that the BBT and ARAT are more appropriate for evaluating dexterous function than the NHPT. Further studies with larger samples are needed to validate these findings.

### At-home training with closed-loop augmented-reality cueing device for improving gait in patients with Parkinson disease

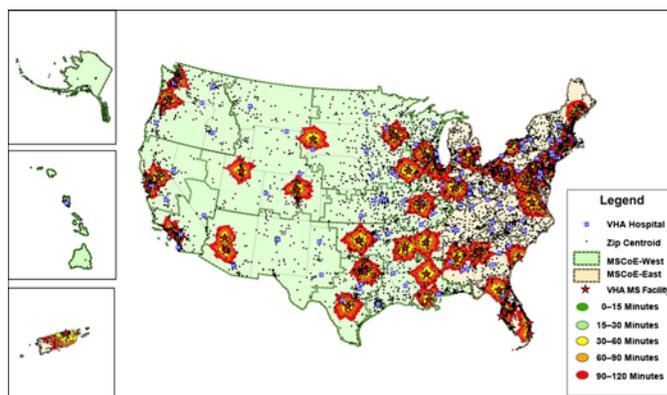
Alberto J. Espay, MD, MSc, et al.



Patients with Parkinson disease (PD) sometimes have difficulties with walking, such as shuffling, short steps, or freezing. Environmental cues may help resolve some of these problems. We examined the role of the two cues, visual and auditory, as conveyed by a device (specialized goggles) to help these patients with walking. We found that these visual and auditory cues may have a role as generated by an easy-to-use device to improve the gait of people with PD.

### Using geographic information system tools to improve access to MS specialty care in Veterans Health Administration

William J. Culpepper, II, PhD, MA, et al.



Using geographic information system (GIS) mapping tools, this study identified possible regional gaps in the Veterans Health Administration's (VHA's) coverage of multiple sclerosis (MS) specialty care based on patients' travel times to the nearest VHA facility providing MS specialty care. The GIS mapping tools allowed travel times to be compared for different "what if" scenarios, such as a new MS clinic located in facility A versus facility B. The GIS mapping tools described are new, valuable tools that can help the VHA decide where to locate new MS clinics so that access to MS specialty care might improve for hundreds or thousands of veterans with MS.